



Department of Energy

ROCKY FLATS OFFICE
P.O. BOX 928
GOLDEN, COLORADO 80402-0928

#000052510

94-DOE-05478

MAY 27 1994

Dr. Frederick R. Dowsett
Hazardous Waste Monitoring and Enforcement
Colorado Department of Health
Hazardous Materials and Solid Waste Management Division
4300 Cherry Creek Drive South
Denver, CO 80222-1530

Dear Dr. Dowsett:

Under the terms of the Federal Facilities Compliance Agreement for Land Disposal Restrictions (FFCA II) which expired in accordance with its terms on May 10, 1993, the U.S. Department of Energy was required to provide minutes for the Monthly Project Manager's meeting. In keeping with the requirement of FFCA II and anticipating similar requirements under a new LDR FFCA, enclosed are the Draft Project Manager's Meeting Minutes from the May 19, 1994 meeting for your review and comment. Please provide any comments you may have within 14 days so that they may be incorporated into the Final Meeting Minutes.

Reference is made to the Draft Meeting Minutes for the April 7, 1994, FFCA II Project Manager's Meeting. No comments on the draft minutes have been provided within the 14 day time frame specified in Section VII, Paragraph 22; therefore, the draft minutes provided previously are considered final.

If you have any questions, please call me at 966-4561, or Bill Prymak at 966-5979.

Sincerely,

A handwritten signature in cursive script, appearing to read "Paul Cote", is written over a horizontal line.

Paul Cote, Acting Director
Waste Management Division

Enclosure

cc w/Enclosure:
D. Maxwell, EPA
R. Sweeney, EM-323
J. Taylor, EM-55
W. Prymak, WPT, RFO
M. Vargas, LLWPT, RFO
R. DiSalvo, WPT, RFO
S. Rudolph, OWM, RFO
G. Dewhirst, BDM
S. Anderson, EG&G

LAND DISPOSAL RESTRICTION
FEDERAL FACILITY COMPLIANCE AGREEMENT
ROCKY FLATS PLANT

PROJECT MANAGER'S MEETING MINUTES

Meeting Date:	May 19, 1994
Meeting Location:	Third Floor Conference Room, Building 051 EG&G Rocky Flats, Inc., Denver West

The meeting was convened at 1:05 p.m.

INTRODUCTIONS:

The following personnel and organizations were represented at the meeting:

Fred Dowsett	Colorado Department of Health (CDH)
Rick DiSalvo	Department of Energy (DOE), Rocky Flats Field Office (RFFO) - Waste Programs (WP)
Steve Howard	SAIC/DOE, RFFO/Solar Ponds Project
Leon Collins	EG&G, Solar Ponds Project
Sandy Day	EG&G, Federal Facilities Compliance Agreement (FFCA) Programs
Becca DePenning	EG&G, Community Relations
Kent Dorr	EG&G, Engineering & Project Management (E&PM)
Steve Keith	EG&G, Solar Ponds Project
Bob Krenzer	EG&G, FFCA Programs
Barb Krogfuss	EG&G, Waste Systems Development (WSD)
Joe Lucerna	EG&G, WSD
Tim McKeown	EG&G, FFCA Programs
Dave Phillips	EG&G, WSD
Walt Pierce	EG&G, FFCA Programs
Rene Riegal	EG&G, Central Planning & Budgets
Steve Felice	Dames & Moore
Geoff Asmus	S. M. Stoller Corporation
Grant Marohnich	S. M. Stoller Corporation

The list of attendee signatures is provided as Attachment 1.

Note: Fred Dowsett and Rick DiSalvo were inadvertently omitted from the sign-in sheet.

AGENDA:

The agenda for the meeting is provided as Attachment 2.

MEETING DISCUSSION:

UPDATE ON SOLAR PONDS REMEDIATION PROJECT - STATUS OF WASTE MANAGEMENT STRATEGIES FOR PONDCRETE, SALTCRETE, AND POND SLUDGE - R. DiSalvo, RFFO, opened the meeting by introducing S.R. Keith as the EG&G Program Manager for the Solar Ponds Project (SPP). The purpose of the presentation was to describe and clarify the plans in CTMP Treatment System 6 for treatment of sludge recently vacuumed from the solar ponds and stored in tanks, and for reprocessing non-land disposal restriction (LDR) ¹ compliant portions of backlogged saltcrete and pondcrete.

S. Keith, EG&G, distributed presentation materials describing the current status and baseline for the project along with associated schedules (see Attachment 3). EG&G noted that sludge removal is currently being conducted, per agreement with CDH and EPA, and sludge is being stored in tanks on the 750 pad. The future disposition of final waste forms is being planned, with a focus on disposal at Envirocare. EG&G continued that there is considerable uncertainty regarding the availability of the Nevada Test Site (NTS) for disposal of low level mixed waste (LLMW). The state of Nevada may not allow NTS to accept LLMW from other DOE sites. DOE, Oak Ridge has recently executed a contract with Envirocare and DOE sites may dispose of 350,000 cubic yards of mixed waste over the next five years, under an exemption to DOE Order 5820.2A, and it appears that there is a potential for the future disposal of Rocky Flats solar pond wastes under this contract.

Phase I of the solar ponds remediation has been expedited 16 months per the Interagency Agreement (IAG) dispute resolution process, and a draft Interim Measure/ Interim Remedial Action (IM/IRA) will be submitted May 27, 1994. Characterization is complete for the sludges from ponds A, B, C, clarifier, and inventoried pondcrete and saltcrete. Based on the characterization data generated by Halliburton (HNUS), approximately 90% of inventoried saltcrete is LDR compliant. This data is currently being reverified to standards necessary for potential disposal at Envirocare.

EG&G noted that treatability studies have been completed for the pond sludges and clarifier. EG&G is currently negotiating a contract for the pondcrete and saltcrete remix treatability studies.

The original plan for cementing the pond sludges, driven by the IAG schedules, had resulted in a C pond sludge/clarifier design that was 100% complete, and an A and B

¹ See 40 CFR 268.1, 268.42, and 268.43

pond sludge process design that was about 95% complete. The pondcrete and saltcrete remix design was still at the conceptual level. This original plan was revised due to several factors, including the lack of an available disposal site, and potential changes to disposal facility WAC. There were numerous risks associated with proceeding with the original pond sludge processing schedule, which were presented to CDH in March of 1993. CDH and EPA agreed to the project baseline at this meeting.

Sludge removal is ongoing and the current plan for processing the material involves using one processing location and, to the extent possible, utilizing an optimization of the original equipment design to treat pondcrete, saltcrete, and the pond sludges.

The optimized equipment design would be located on the 904 pad because the originally proposed location for the process (750 pad) is two-thirds full with the tanks storing pond sludge. The current baseline includes shipments of LDR-compliant saltcrete to Envirocare to be completed by 1996, which would free up one tent on the 904 pad. The proposed design enhancements to optimize the processing equipment and operation would allow for a reduction in the projected volume of final waste product, which in turn would reduce disposal costs considerably, as well as identifying the potential for using the new processing facility for treatment of other low level mixed (LLM) waste forms currently stored or generated at Rocky Flats.

There is also an effort underway to delist the processed waste form, which would enable disposal of the final waste at NTS as non-hazardous low-level waste. This could possibly reduce mixed waste disposal costs by up to \$42 million. Fred Dowsett, CDH, recommended that the draft Sampling and Analysis plan in support of the delisting petition should be reviewed by CDH prior to the start of sampling and analysis activities. Rocky Flats will solicit CDH input and guidance for the delisting effort. CDH indicated that it was skeptical of any delisting effort based upon treatability studies. RFP is proposing the delisting effort to be conducted prior to the final production process for the candidate waste forms with a pilot run of the full scale process validating the delisting petition.

Fred Dowsett, CDH, inquired why the original design work for the process trains is not sufficient to begin treating pond sludge, and why the schedule had been extended to allow for redesign when designs already exist to produce an LDR-compliant final waste form.

Steve Howard, SAIC/RFFO, stated that the original HNUS designs were not being redesigned, but the three process trains that were originally planned were being integrated to allow for cost savings resulting from sharing the process equipment and the potential volume reduction in the final waste form requiring disposal.

CDH stated that they would need to see considerable documentation and detail that explained why the new approach is required and why existing designs are not sufficient. CDH noted that they have considerable concerns regarding the length of time that sludge material will be stored awaiting completion of revised design effort and the construction of processing trains. The Site Treatment Plan (STP) required by the Federal Facility Compliance Act (the Act) will require that enforceable milestones and schedules be developed for the treatment of the sludges, pondcrete and saltcrete, and the new baseline schedules currently proposed by SPP and RFFO will require considerable justification for CDH to agree to them.

Steve Keith, EG&G, responded that although the process and instrumentation design was nearly complete for the cementation processes, the physical engineering design had not been initiated. Now that the location has changed, physical engineering design modifications would be required in order to complete the optimized process design.

Steve Howard, SAIC/RFFO, stated that the baseline schedule presented to CDH and EPA in March 1993 would allow for the mitigation of the project risks by providing the time to optimize the designs and to plan for sludge processing and remix operations outside the Protected Area (PA). In addition, the original engineering was designed to meet NTS WAC, and redesign would focus on Envirocare WAC. Significant cost savings could result by achieving higher packaging efficiencies with a more sophisticated process design.

CDH reiterated that more convincing documentation that described why the re-evaluation of options makes sense at this time should be submitted to CDH before RFFO could hope to obtain CDH agreement with the new SPP baseline.

Steve Howard, SAIC/RFFO, stated that millions of dollars could be saved by sharing systems and reducing burial costs, now that processing options were not driven by the IAG schedule and that CDH and EPA have been working extremely close with SPP. All of the project decisions have already been presented to CDH and EPA.

Steve Keith, EG&G, added that the proposed baseline schedules represent a plan that falls within current budget requests, while previous plans developed under the IAG had exceeded DOE budget allocations.

Rick DiSalvo, RFFO, commented that there appeared to be two issues being discussed: (1) What has occurred in the past with the SPP and how did the present situation come about, and (2) Does the current schedule and approach seem reasonable and achievable?, i.e. Will it meet LDR, is the time frame acceptable, and will the schedule work within the Act process?

CDH repeated that they needed to be convinced that the new baseline schedule made sense, and needed to review the cost of compliance over the past 4 years to evaluate the cost of continued storage. It appears that Rocky Flats has a large amount of data and information compiled over the years, and it seems that another engineering design effort is not needed. CDH does not need an explanation of the history of the SPP, but an explanation of the current baseline schedule.

Steve Howard, SAIC/RFFO, inquired if non-availability of funds was an adequate reason for not meeting proposed schedules. CDH responded that funding limitations are not a defense for continued non-compliance, although they were concerned that DOE would receive adequate funding to implement the project. Steve Howard added that the program has always been committed to solving problems in the most cost effective and safe manner possible. The current baselines were developed in concert with the regulators and are ones which contain reasonable and supportable funding profiles.

CDH inquired as to the likelihood of actually sharing process equipment for treatment of the sludges and the reprocessing of previously solidified material. It appears that the processes would not require the same equipment in most cases, so it is unclear what the benefit of combining the designs would be. Continued storage of the sludge in the tanks on the 750 pad is a concern to CDH and they would like to see the material solidified into an LDR compliant waste form sooner than the baseline schedule indicates.

Steve Howard, SAIC/RFFO, commented that RFFO would provide information to CDH of the planned improvements in the engineering design. R. DiSalvo, RFFO, noted that within the context of the STP, it would be made clear that proposed schedules are real and achievable. Steve Howard also commented that the schedule presented by SPP is the baseline schedule for the program.

In closing, CDH requested a written explanation from DOE and stated they would require more time to review and respond the proposed changes and new baseline schedules. RFFO agreed to provide this information and additional meetings to clarify and further discuss these issues with CDH.

PUBLIC INVOLVEMENT - PLANNING AND ACTIVITIES FOR UPCOMING TECHNOLOGY SHOWCASE - Becca DePenning, EG&G Community Relations, discussed the upcoming technology showcase on May 25. Scott Anderson, EG&G FFCA Programs, will be opening the showcase with a discussion of the implications of the Act and the current technology development activities at Rocky Flats. Table-top models of the Fluidized Bed Unit (FBU) and the microwave solidification unit will be available for viewing. Principal Investigators (PIs) for the FBU, microwave solidification, polymer solidification and cementation will be present to answer questions regarding the technology applications. Flip charts to adequately answer

public questions will be available, as will fact sheets and recent papers on the relevant mixed waste treatment technologies.

EG&G noted that funding has recently been received to begin the community interview process, and a video is under development to depict RFP LDR compliance activities.

R. DiSalvo, RFFO, discussed the April 20, 1994 public meeting and stated that the Conceptual Site Treatment Plan (CSTP) and the Draft Site Treatment Plan (DSTP) Framework was made available and copies were taken by some members of the public. A discussion of the Act was presented, including the potential for wastes to be shipped both to and from Rocky Flats for treatment.

Fred Dowsett, CDH, noted that while on the topic of public acceptance, he had recently spoken with the radioactive materials license board of Utah informally, and they had requested that RFP not publish press releases regarding the shipment of wastes to Envirocare. They would like to keep the visibility of any potential or actual shipments of Rocky Flats waste low due to public concern when other states make press releases regarding shipment of wastes to Utah.

R. DiSalvo, RFFO, inquired if the state of Utah will be participating in upcoming National Governors Association (NGA) meetings regarding equity issues involving the FFC Act process. CDH commented that Utah would be participating in the meetings.

RFFO stated that technology recommendations needed to be complete for some CTMP treatment systems by August of 1994 and that an full day Technology Showcase was planned for the near future to present the technology evaluations and recommendations for inclusion in the STP. RFFO noted that it has been difficult to get public input on technology recommendations, and RFFO would like to have CDH assistance in obtaining public interest and involvement. The recently funded community interview process was designed to reach a broader audience than public meetings.

CDH stated that it is difficult to get the public involved in technology issues unless there is potential for offsite releases. R. DiSalvo, RFFO, requested that CDH be present at the upcoming technology showcase and participate in the release of technology information and implementation recommendations to the public. CDH stated that it would be beneficial to have EPA present as well, and that RFFO should consider discussing complex-wide technology application issues and initiatives at other sites as well as RFFO-specific technology development issues.

EXPEDITED TECHNOLOGY DEMONSTRATION STATUS - Joe Lucerna, EG&G WSD, distributed presentation handouts and discussed the status of the expedited technology demonstration program at Rocky Flats (see Attachment 4). Three demonstration projects were implemented in 1994. These include cyanide destruction

in spent plating bath waste using electrochemical chlorination, reactive chemical destruction using ultraviolet (UV) oxidation, and macroencapsulation of debris wastes using polyethylene.

Cyanide destruction results have been positive to date. A cadmium cyanide solution has been successfully tested, and plans are currently underway to test a gold cyanide solution. The gold cyanide solution is more acidic and therefore more resistant to electrochemical chlorination. Future tests may include testing on some solids, including the raw material for the plating baths.

Preliminary testing on reactive chemicals has indicated that the combination of UV oxidation and hydrogen peroxide to initiate oxidation is effective. Testing is continuing to prove the technology for application to future chemical generation.

The treatability study for macroencapsulation of wastes in polyethylene is being investigated for debris wastes as defined in EPA's Hazardous Debris Rule². The technology appears promising due to its relative simplicity and high public acceptance. EG&G has suspended further research efforts into the feasibility of using premanufactured polyethylene inserts in response to EPA's interpretation of macroencapsulation under the Debris Rule. Joe Lucerna, EG&G, presented a sample of a final waste form that demonstrated that physical contact between the waste matrix and the polyethylene is achievable. In the sample, an aluminum basket was used to hold the surrogate mixed waste in place, while polyethylene was extruded around the basket. Other materials are being considered for the basket, including plastic mesh construction, that may eliminate the potential for leak paths by melting the basket material as the polymer encapsulation matrix is placed. Key issues with the process include the lack of an approved disposal site for the final waste form, and questions regarding the potential volatilization of organic compounds that may be present in some waste forms. Future technology application testing and demonstration will focus on these issues.

Planning is currently in progress to continue expedited technology demonstrations in Fiscal Year (FY) 1995 and outyears. Waste stream candidates and associated treatment technologies are being prioritized, and cost estimates for funding requests are being developed.

*OTHER DISCUSSION - RD&D PERMIT APPLICATION-POLYMER
MACROENCAPSULATION PROCESS FOR DEBRIS AND LEADED WASTE - B.
Krogfuss, EG&G WSD, distributed handouts and discussed the status of the RD&D*

²57 FR 37194 - 37282, August 18, 1992, Environmental Protection Agency, "Land Disposal Restrictions for Newly Listed Wastes and Hazardous Debris; Rule"

permit application for polymer macroencapsulation for debris and leaded waste (see Attachment 5). The two waste forms are being submitted as one permit application because the technology is the same for both waste forms and the technical research team consists of the same people. An RD&D permit is required to determine the waste characteristics that are amenable to the process, resolve scale-up issues, generate sufficient samples to prove the technology and perform parametric studies, define the operating parameters for the full scale system, and to determine the best design for the production system. The completed RD&D permit application is due to be transmitted to CDH by June 30, 1994.

Comments from CDH were recently received by RFFO regarding the Draft RD&D permit for Building 374 nitrate salts³. Common elements from the nitrate salts permit application have been identified and will be incorporated into the permit application for polymer macroencapsulation. The contingency plan will be rewritten to define when other documents (i.e. plant procedures or the Part B Contingency Plan) take over from the permit and where they are found. EG&G would prefer that the permit be written to reference other documents to the extent possible as opposed to including parts of other documents as Appendices to the permit. This approach will ensure that changes to other documents will not require revisions to the permit.

Fred Dowsett, CDH, inquired if the new proposed rule by the EPA regarding the amount of debris waste that can be treated under a Treatability Study Exemption (TSE) would eliminate the need for this permit application. He stated that the rule, which would increase the amount of waste allowed for use during the TSE to 10,000 kg, would likely be adopted by the State of Colorado within the next few months. Barb Krogfuss, EG&G, stated that this would eliminate the need for the debris portion of the application, but that lead already has a treatment based standard and may not be debris under the Debris Rule. EG&G, RFFO, and CDH agreed that this issue needs to be reviewed more thoroughly.

OTHER DISCUSSION - CTMP MILESTONES - R. DiSalvo, DOE, RFFO, presented handouts and discussed proposed revisions to milestones presented in the CTMP (see Attachment 6). RFFO noted that given the FFCA II had expired, the draft CTMP milestones had not been finalized between DOE and EPA, and the change in lead regulatory agencies under the Act (from EPA to CDH), it was uncertain to RFFO how to administer the draft CTMP milestones. RFFO commented however that under the FFCA II administrative requirements, RFFO was obligated to submit notifications and a recovery plan for all changes or modifications to the CTMP milestones. Accordingly, RFFO is considering transmitting formal correspondence to CDH and EPA in order to notify the regulatory agencies of revisions by DOE to several of the draft CTMP

³The Draft Building 374 Salt Immobilization RD&D Permit Application was submitted by RFFO on December 30, 1994

milestones. CDH agreed to this approach.

Tim McKeown, EG&G FFCA Programs, explained that although the three year planning horizon, contained in Section 4 of the Annual LDR Progress Report (APR), presented the milestones that had changed in the next three years, it did not give the complete picture of how the outyear milestones were impacted. The milestone information presented in Attachment 6 identified revisions to CTMP milestones beyond the APR three year window and indicated how the capital project schedules could be recovered to be completed within the original compliance period outlined by the CTMP.

CDH remarked that the outyear CTMP milestones are planning tools and subject to revision as the current year compliance activities are pursued and outyear activities become better defined. The STP may want to recast the designations of primary and secondary milestones and reflect the compliance activities outlined under the Act. RFFO noted that the FFC Act STP process may result in changes to the draft CTMP milestones.

OTHER DISCUSSION - RECENT SUBMITTAL OF MODIFICATION TO PERMIT BY ENVIROCARE FOR TREATMENT OF WASTES - Fred Dowsett, CDH, inquired if RFFO was aware of the recent submittal by Envirocare for a permit modification to include mixed waste treatment capacity. Rick DiSalvo, RFFO, noted that RFFO had contacted Envirocare regarding the recent development, but Envirocare was reluctant to discuss the potential treatment of RFP mixed wastes at this time.

ADJOURNMENT

The meeting adjourned at 3:35 p.m.

Next meeting: 1:00 p.m.
Wednesday, June 22, 1994

Location: Third Floor Conference Room-West
EG&G Rocky Flats, Inc.
Building 051, Denver West

Draft Topics for June meeting:

1. RFFO to present the latest guidance from DOE, Headquarters (HQ) regarding the inclusion of Environmental Restoration wastes in the STP.
2. RFFO to discuss mini- performance assessment being done by the DOE disposal work group for final waste form performance and disposal.

TIME: 1:00 p.m.

DATE: May 19, 1994

[illegible]